HAMATEUR CHATTER

The Milwaukee Radio Amateurs Club

August 2009, Volume 17, Issue 8

One of the World's Oldest Continuously Active Radio Amateur Clubs—since 1917

Presidents Letter

YAHOO! Did you know MRAC has a Yahoo Group? Are you a member? The statistics say you aren't. Less than half our members have joined the MRAC Yahoo Group. As a result the group is pretty quiet. YOU can change that.

Other clubs are using their Yahoo group to make announcements, ask advice on equipment, get help with their radio, operating questions and just about everything else. It would be great to see some of the vast experience of our members shared in a group environment. It would also be a great selling point for the club, especially to newer and younger members. As anyone that has attended a meeting in the last year may have observed, the membership has been dwindling. Before we initiate a mass mailing to recruit more members we need make this club appealing (i.e., beneficial) to new members. A active Yahoo Group would be a great enticement to new members. If you haven't signed up please do it (now). If you are signed up, start a conversation. How about the merits of the G5RV? That seems to ALWAYS work!

Along the lines of offering benefits, one idea being considered is for the club to buy common items needed by hams and making them available to club members at the club's cost. One example was coax cable. The club could buy it in bulk along with connectors also bought in bulk. Since everyone needs cables from time to time this seems like a logical item that would be in demand by our members. We have some members that can crimp on connectors. Maybe a small fee (think like $1 with this 'fee' going to the club) might be charged for crimping service and help with club finances. Would you be interested in a 100 foot custom cable for (speculating here) around $20. What about other common items needed by hams? Your ideas would be great to hear. Talk to any board member or try out the Yahoo Group! We'll like to hear from you. We said it before… this is YOUR club and it is what you make it.

The club has a new mailing address. We moved our PO box to a more convenient location for the present board. Our new address is MRAC, P. O. Box 240545, Milwaukee, WI 53223. The web site will be updated soon (if not done already by the time you read this).

One last bit of club business. We are still looking for some one to fill the Treasurer and Secretary positions. Have I said, this is YOUR club and is what you make it? We need some one to step up and help us make that happen. We also need a volunteer for our 2010 FD captain. This position really needs to be a committee. Volunteer now and you will have plenty of time to get your committee up and running well in advance of the next FD season. We also need some one to take over the operation of the club web site. I'm told the work is relatively easy. The site only needs attention a couple of times a month to update meeting dates. test dates, program information, post Chatters, etc. If that sounds too boring, we always welcome more ambitious additions to the site.

I was going to comment on my recent radio activities in this column. Look for it elsewhere as space here is at a premium.

As always, I would like to know what you think about anything in this column or about the club in general. Please consider helping the current BOD and volunteering for one of the open positions. I said it above and I repeat it here…. "This is your club and IS what you make it".

Mark AB9CD

MRAC Officers:

Terms Expiring in 2010

- President – Mark, AB9CD
- V-President-Brian, K9LCQ
- Secretary – Vacant
- Treasurer – Vacant
- Director – Dave,WB9BWP
- Director – Dave,KA9WXN

Terms Expiring in 2011

- Director – Al, KC9IJJ
- Director – Howard, AB9FH
- Director – Mike, KC9CMT

The Club Phone Number is: (414) 332-MRAC or

(414) 332- 6 7 2 2

Visit our website at:

www.w9rh.org

Mail correspondence to:

M. R. A. C.

P.O. Box 240545

Milwaukee, WI 53223

Membership Meeting Minutes

MRAC General Meeting July 30, 2009.

Meeting Called to order by President Mark Tellier at 7 PM. Temporary Secretary duty by Dave DeFebo WB9BWP.

The microphone was passed around for introductions.

There being no Secretary, there were no minutes of the June meeting.

The Treasurers report was read and approved.

A report was made on the recent Field Day. The club operated 3A using generators for the first time in a number of years. To do Field Day next year someone must volunteer to be the Chairman. The volunteer must step up before the end of 2009, or we may miss participating in Field Day for possibly the first time since the contest began in 1930.

Tom Fuszard KF9PU gave a report on the recently held NCVEC annual meeting in Gettysburg, Pa. Among the highlights is a new question pool for the Technician license being released by December for new Tech tests next year.

The meeting was opened for "buzztalk" and any announcements from attendees.

The membership was reminded that the club needs people to step up for the offices of Treasurer and Secretary to fill out the remaining terms of 1 year. We also need someone to take over the club web site maintenance from Brian White K9LCQ who has done it for a number of years over a couple of different stints.

A brief discussion occurred about possible club services we may provide to members like quantity buys of coax, connectors, whatever, club owned tools, group purchases of kits and group assistance. A suggestion from the crowd also included antenna installation items like gin pole, climbing equipment, etc. No action was promised or taken.

After a short break, Mark Tellier discussed an incorrect question on the current Technician test.

Poncho Doneis KA9OFA gave a presentation on his progress building the Softrock software defined receiver kit the club purchased last fall. He has completed construction and has completed sub assembly testing but is having a problem getting the completed receiver to function. Stay tuned for more details on progress at a future meeting.

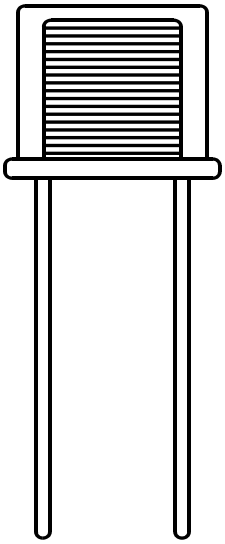
The meeting was adjourned at 8:25 PM.

Dave DeFebo, WB9BWP

Electrical Review, November 22, 1899, page 336:

A Wireless Telegraphy Newspaper.

Mr. Marconi, who was a passenger on the steamship St. Paul, which reached Southampton on November 15, installed aboard the ship a set of his wireless telegraphy apparatus with which he communicated to the signal station at The Needles when the vessel was forty-five miles away, as follows: "All aboard well; everything satisfactory." Mr. Marconi asked the signal station at The Needles for the latest Transvaal war news when the St. Paul was sixty six miles away. As the voyage neared its end, Mr. Marconi published a paper on the St. Paul which he called the *Transatlantic Times*. It contained all the news he received from The Needles in response to his wireless telegraph inquiries. The news included a summary of the South African situation and a story regarding the loss of the U. S. S. Charleston off the coast of Luzon. The paper was sold for $1 a copy, and the money was donated to the Seamen's Fund. A passenger, when the steamer was forty miles from shore, sent a wireless telegram arranging for a supper party in London on his arrival. Other passengers also availed themselves of this method of communication. On the arrival of the St. Paul at Southampton, six of Mr. Marconi's assistants took another ship and sailed for Cape Town, where they will start for the scene of the war to operate wireless telegraph instruments already on the ground. It is reported that the new British battle ship Canopus will be fitted out with wireless telegraph apparatus.



From the ARRL Weekly Bulletin

SCOTT REDD, K0DQ: THE BIGGEST GUN OF ALL

Vice Admiral John Scott Redd, K0DQ (US Navy, retired) has, throughout his 36 year military career, helped to make the world a safer place. From postings in Uruguay to Iraq to serving as Commander of the Navy's Fifth Fleet as a naval officer, to becoming Director of the National Counterterrorism Center (NCTC), Redd has served his country with distinction. President George W. Bush presented him with the National Security Medal in a White House ceremony **<http://www.arrl.org/news/stories/2009/01/27/10594/>** for "his more than 40 years of exceptional service to the Nation, strengthening its intelligence capabilities and improving national security." President Bush called Redd "an innovator, a strategic thinker, an inspirational leader and a dedicated servant to the Nation, respected for his vision, courage and integrity." But intermingled in his Navy career was Amateur Radio. In 2008, Redd, an active DXer and contester, became the first person ever to win all six of the major HF contests: The ARRL International DX Contests (SSB and CW), the CQ World Wide Contests (SSB and CW) and the CQ Worked All Prefix (WPX) Contests (SSB and CW).

"Ham radio was my 'Internet' in the 1950s," he told the ARRL. "Growing up in a very small town (Sydney, Iowa, population 1000), ham radio was my window to the world that generated an interest in far-away places and a vision to do something beyond my home town. That turned out to be the US Navy, via the US Naval Academy. That changed my life. The Navy is a technological service and virtually everything in the military has a technical dimension. Electricity, electronics and especially, the electromagnetic spectrum, were key aspects of most of my seagoing tours and, indeed, even my later policy assignments. Being comfortable with technology -- having built kits, antennas and the like -- and being zapped with 110 ac more than a few times -- gave me a leg up."

Redd started out in 1954 as a DXer as K(N)0DQI; he had earned DXCC by the time he turned 13, "which I audaciously proclaimed on my QSL cards as the youngest in the world (no one ever objected!)," he quipped. "Climbing the DXCC Honor Roll died as a dream when I went to the Naval Academy in 1962, so the logical thing was to turn to DX contesting. I operated contests as a multi-operator from W3ADO for four years then, as CX2CO in 1967 CQWW in Uruguay as a Fulbright Scholar. That was my first World Championship, competing in the M/S [multi-operator/single transmitter] category; that was also my last multi-operator experience."

In the early 1970s, Redd was on assignment at the Mexican Naval Academy. While there, he was "contesting consistently as XE1IIJ (with a number of aliases, including 6D1AA, 4C5AA and 6J9AA). In the 1971/2 contest season, I managed to win four of the five major contests: Both modes of ARRL DX, CQWW Phone and WPX SSB (there was no WPX CW in those days). I placed third in the world in CQWW CW. That set me on a personal quest to win all five (later six) of the major DX contests." Redd pointed out that one of his many contesting highlights was working 10,000 QSOs in the 1973 ARRL International DX Phone Contest:

"This was before 5BDXCC and 10 meter Novice phone and it was the first time that had been done -- it was also the last time I did a phone contest to any useful effect. I think that stands as the all time two weekend ARRL DX phone record (it's sort of like Roger Maris breaking Babe Ruth's home run record -- it gets an asterisk)."

As his naval career progressed, he didn't have the chance to contest as much as he had before, "other than occasional contests from Lenny Chertok's W3GRF (now a Silent Key), QTH. Most were Top 10 finishes, but I only won the US once -- the ARRL DX CW in 1986. My next contesting opportunity was A92Q in 1995 when I was the Fifth Fleet Commander, homeported in Bahrain. By that time, there was a CW WPX and that contest was my first contest in almost a decade (and the first one using a computer to log)."

Six years later, after Redd retired, Jim Neiger, N6TJ, introduced him to Jacky Oduber, P43P, and "goaded me into going down to Aruba," he told the ARRL. "My first contest from Aruba was CQWW CW in 2001 as P40Q. I would classify this as a 're-learning experience,' but it resulted in a #5 finish in SOABHP [single operator, all band, high power]. Seven months later, I went back to Jacky's for WPX CW and won the World SOABHP as P41P. So I had now won the World in the SOAB category in five out of six of the majors, but I was still missing a CQWW CW win for the Grand Slam."

Calling the 2002 CQWW CW the "Year of Aruba" -- the three top scores in the contest came from there -- Scott placed second. "In 2003, I was going back into government and preparing to go to Iraq, so there was no contesting," he recounted. "In 2004, I headed back to Aruba for the CQWW CW, but I came up short as #3 WW in SOABHP. In spring of 2005 -- just after having been nominated by President Bush to be Director of the National Counterterrorism Center (NCTC) <http://www.nctc.gov/> -- I went back to Aruba and won CQ WPX CW in the Low Power category; I barely missed the SOAB LP all-time record. In the process, I found out I enjoyed the LP category. The next three years were completely driven by work at NCTC. I finally got back to contesting almost four years later when P40A's QTH was available for CQWW CW 2008. There were no amplifiers, so I entered SOABLP [single operator, all band, low power]: That resulted in the final piece of the puzzle falling into place."

Jeff Briggs, K1ZM, invited Redd to operate VY2ZM on Prince Edward Island for the ARRL DX CW Contest in February this year. "That was clearly right place (great low band antennas and near Europe) at right time (sunspot minimum), resulting in #1 W/VE, as well as top worldwide SOABHP," he told the ARRL.

"The 'bookends' for ARRL DX are almost four decades apart: The Mexican operations (winning the world on phone and CW in '72 and phone in '73) and, interestingly, winning W/VE from VY2ZM in this year's ARRL DX CW," he said. "That also turns out to have been the top worldwide score. In between, I've probably operated a dozen ARRL DX contests as W3GRF or, more recently, W4RX (or K0DQ from W4RX's station), all near Washington, DC and at great

From the ARRL Newsletter Continued:

disadvantage to the New Englanders. Most were Top 10, but the only one I won before this year was the 1986 one from W3GRF."

In 2008, Redd was inducted into the CQ Amateur Radio Hall of Fame **<http://www.arrl.org/news/stories/2008/05/16/10100/>.** The CQ Amateur Radio Hall of Fame honors those individuals, whether licensed hams or not, who have made significant contributions to Amateur Radio, and those amateurs who have made significant contributions either to Amateur Radio, to their professional careers or to some other aspect of life on our planet.

Redd calls Amateur Radio "a magical hobby, even for me at 64. Although I would certainly have liked to have been more active over the years, absence did make the heart grow fonder and I still get a blast out of contesting, even though I feel like I'm always relearning old lessons which have receded in my subconscious."

Next Regular Meeting

The next meeting will be August 27th at 7:00PM. We meet in the Fellowship Hall of Redemption Lutheran Church, 4057 N Mayfair Road. Use the south entrance.

Please do not call the church for information!

Club Nets & Breakfast

Please check in to our nets on Friday evenings.

Our ten meter SSB net is at **8:30 p.m.** at **28.490 MHz USB.**

Our two meter FM net follows at 9:00 p.m. on our repeater at **145.390 MHz** with a minus offset and a **PL of 127.3 Hz.**

Join us for Saturday morning breakfast at **Maxim's Restaurant, 18025 W. Capitol Dr.** We usually meet at around 8:00 a.m., and order around 8:15 a.m. The food and the company are good and;

You don't have to be a member of the club to join us!

Visit our website at: **www.w9rh.org**

Or phone (414) 332-MRAC or 332 - 6722

Club Repeater,
145.390Mhz Minus Offset
(127.3 PL)

PSE this Month

If you know me, you know I spent a fair amount of my radio on-air time working public service events, PSEs (otherwise I tend to be more involved in the technical side of the hobby).

This month I worked both days of the MS Society Best Dam Bike Tour. This event starts in Waukesha on Saturday and ends in Madison on Sunday. Everyone stays overnight in Whitewater at Hotel UWW (ok, really its one of the dormitories at UW Whitewater). I've had fun working this event for 5 years. Many ARES members are involved in this event, but many participants are not in ARES. The common trait is everyone involved wants to give back something on behalf of the hobby. It just happens that in the process we have a great time. A side effect is we practice emergency communication skills (for when the big one hits). IMHO, this event does the most training for the 'big one' of any similar event I work. This year I experienced the best communications of any event I have ever worked, including time I have spent doing communications during my days as F&C in SCCA (Flagging and Communication / Sports Car Club of America) at the race track (think Road America). At the race track we learn many things go wrong all at once. It seemed to be a rule. Bandwidth on the radio is precious. We had to say everything about an incident in the fewest words possible to get everything needed to the right place as fast as possible. This needed to be done so the other incident(s) were able to do the same. It's a skill that was taught and needed to be practiced. During a bike ride with 1500 riders spread over 100 miles, 10 SAG wagons, 3 med units, a half dozen rest stops and a similar number of event personnel shadows you quickly find very little left-over bandwidth. You need skilled operators able to pass traffic quickly and efficiently. This skill was evident during the BDBT and it was impressive to experience. These are the folks you want to be around for the 'big one'. They put a very positive face on amateur radio and hams in general.

Another event, much more relaxed in nature, but just as fun, was cancelled this year. WX (including lightening) precluded the Wheeling for Healing bike ride (run by the Menominee Falls Memorial Hospital) this year. Funny thing all the hams reported to duty on time and were rewarded with their free T-shirt for doing so. BTW, most events provide volunteer T-shirts. That's considered that your reward for volunteering! :-)

Public service events are always looking for new volunteers and are a great way to use your investment in equipment to support this great hobby, give back a little bit and go home with a good feeling at the end of the day. Pick an event later this year or mark one on your calendar next year and try out a new area of the hobby. I promise you will go home with a great feeling and a good experience.

73,
Mark

Chatter Deadline

The **DEADLINE** for items to be published in the **Chatter** is the 15th of each month. If you have anything (announcements, stories, articles, photos, projects) for the 'Chatter, please get it to me before then.

You may contact me or Submit articles and materials by e-mail at: **Kc9cmt@earthlink.net**

or by Post at:

Michael B. Harris

807 Nicholson RD

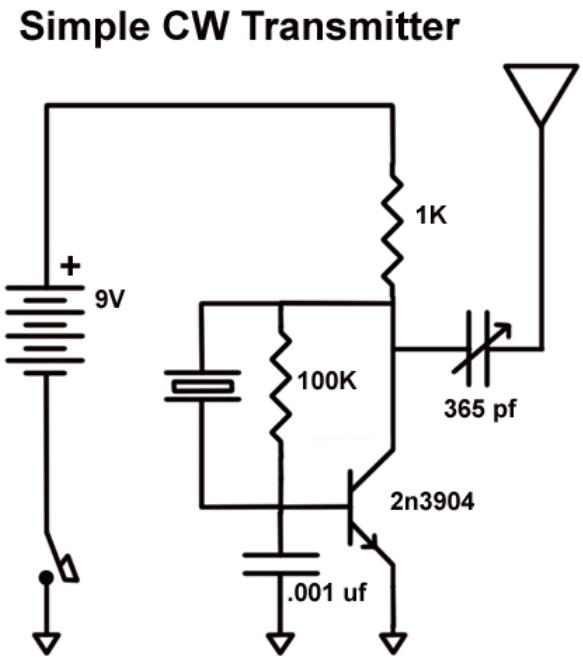
South Milwaukee, WI 53172-1447

Experimenter's Bench

A simple 80 Meter CW Transmitter Using A 2N3904.

By Nyle Steiner K7NS April 2008.

I call this very simple transmitter the "Easy Ten" because it can be easily heard at a distance of 10 miles. Transmitter antenna is a random length wire run through a hole in the wall and thrown into a tree.

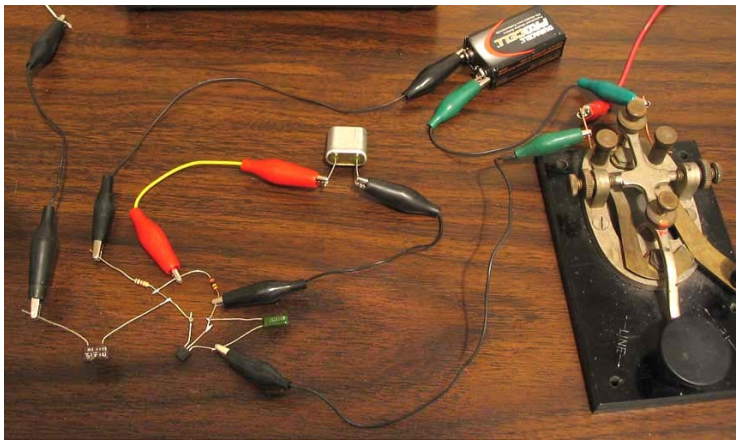


Antenna Adjustment.

I am not an antenna fanatic and I like to work with the simple stuff, especially when it comes to working with frequencies in the 3.5 and 7 MHz range. Fussing around with coax lines, SWR, baluns and all that fancy stuff does not usually appeal much to me, nor have I found it at all necessary for getting a signal out. A simple random length of wire thrown into a tree works very well if you can simply adjust the transmitter to put a signal into it.

I certainly am not trying to say this is the best way to make antennas. The point that I wish to emphasize is that the simple techniques that I am describing here, do work well and make good respectable antennas. I have made many many contacts across the pacific ocean and across the United States using simple antennas as described here and just one watt of output power. I have almost always been able to make contacts with stations at least two states away from any given antenna setup using just one watt.

A simple homemade level meter can tell you when you have optimized the signal output to the antenna. The signal meter is capacitively coupled to the antenna and reads it's RF voltage level. A signal level meter can be easily made from a DC microameter and a germanium diode. Connect the germanium diode across the meter with the cathode on the positive side. Then connect one side of the meter to ground and the other side of the meter to a short wire (one or two feet long) that rests near the antenna wire from the transmitter. It does not matter which



side of the meter goes where.

With the key down, adjust the 365 pf variable capacitor in the circuit above for a peak reading on the meter. That is all there is to it. With the circuit described above, a big antenna will tend to swamp the oscillator and prevent it from running. The variable capacitor attains the best compromise between swamping the oscillator and having too little of antenna coupling. The picture above shows a fixed capacitor feeding the antenna. A variable capacitor was first used to peak the signal meter and then an equivalent fixed value capacitor was put in it's place. A capacitor is not necessary at all sometimes with shorter antennas. In this case the antenna can be connected directly to the transistor collector.

This simple meter has worked well on numerous other transmitter projects. This meter can not tell how much power a transmitter is putting out but it is very good for indicating when the transmitter is putting the most signal into the antenna. For a given transmitter, you don't really need to know how much power it is putting out. You just need to know when the transmitter is putting what it is capable of into the antenna. This meter seems to accomplish that.

With all other conditions remaining the same, the more signal voltage there is on the antenna, the more power the antenna is radiating. It is that simple. Don't worry about near field and far field theory or any of that stuff. According to theory that I have read, you can not have a near field without having the far (radiating) field.

There is a basic rule about loading an antenna with this signal level meter. The indications from the meter are valid as long as changes or adjustments are made between the meter and anywhere in the transmitter. The meter indications may not be valid for any changes made beyond the meter (farther out the antenna or ground lead).

When you want an idea of how much power the transmitter can put out, it is easy to substitute dummy load resistors at different values in place of the antenna. The peak to peak voltage across the resistor read by an oscilloscope, can then be divided by two and multiplied by .707 to get the rms value. This value when squared and divided by the resistor value will give the power being fed to the resistor according to ohms law. I am usually curious about the values obtained using 50 to 220 ohm resistors.

It appears that the simple circuit shown above can work well into a wide variety of load values without using any additional load matching components. Using a 9v battery I measured the transmitter RF output power into several dummy load resistors as described in the previous paragraph. The result was in the range of about 5 to 7 milliwatts. They are listed below.

56 ohms 1.5v pp 5.02 milliwatts
150 ohms 3v pp 7.49 milliwatts
220 ohms 3.5v pp 6.96 milliwatts
510 ohms 5v pp 6.1 milliwatts

I was also able to run this transmitter on 3 volts but the power output was much lower - in the range of 300 to 400 microwatts. These microwatt levels could still be heard (not as strong) several miles away.

Experimenter's Bench continued:

The circuit outlined is far from a representation of the amount of RF power output that can be supplied from a single transistor circuit. The main purpose of this project was to get an idea of what can be accomplished by simply coupling an antenna to a simple oscillator circuit.

It seems that the biggest disadvantage to all this simplicity is the difficulty in knowing exactly how much power is going up the antenna. Getting optimum power up the antenna is not nearly as difficult and is the main concept presented here. The dummy load resistors tell how much power can be put out with different loads but the exact load these random length antennas present to the transmitter is a bit more difficult to determine.

The Beginnings of Wireless Radio:

Wireless at sea, the Early Years.

In 1905, the distinctive Morse code character string ...---... (SOS) was adopted by Germany for signifying distress, as reported in German Regulations for the Control of Spark Telegraphy, from the May 5, 1905 issue of *The Electrician*. (A German-language account of the adoption of the April 1, 1905 regulations appeared in the April 27, 1905 issue of *Elektrotechnische Zeitschrift*: Regelung der Funkentelegraphie im Deutschen Reich). In 1906, SOS was adopted at the Berlin Radiotelegraphic Convention as the official international standard for distress calls, although Marconi operators in particular were slow to conform -- G. E. Turnbull's Distress Signalling, from the 1913 edition of the annual *The Yearbook of Wireless Telegraphy and Telephony*, noted that the Marconi companies had adopted "C.Q.D." as a distress signal in 1904, only to have it supplanted by the international ratification of "SOS" two years later. Turnbull reports that even after this some of the old-time Marconi operators continued to use C.Q.D. for a time, although "The change of the call letter is, however, a sentimental regret, and 'C.Q.D.' is being gradually forgotten." However, in 1909 not all the Marconi operators had made the switch, reflected by the title of Alfred M. Caddell's article about sinking of the *Republic*, C Q D, which appeared in the April, 1924 issue of *Radio Broadcast* magazine. The February, 1909 issue of *Modern Electrics* printed a transcript of radio communication related to this event in Operator Binns' Wireless Log. And a review by *Baltic* Captain J. B. Ranson of the twelve long hours it took to find the *Republic*, The Triumph of Wireless from the February 6, 1909 issue of *The Outlook*, included Ranson's opinion that, due to recent scientific advances -- especially radio communication -- "the passenger on a well-equipped transatlantic liner is safer than he can be anywhere else in the world." (Because three-dashes in American Morse stood for the digit "5", unlike International Morse where it stood for the letter "O", in some U.S. practice the distress signal was referred to as "S5S", for example, "S 5 S" Rivals "C Q D" for Wireless Honors, from the February, 1910 *Popular Mechanics*.)

RADIO USE DURING EMERGENCIES

Radio greatly reduced the terrible isolation of ships during emergencies, and was quickly responsible for saving thousands of lives. Notable Achievements of Wireless, from the September, 1910 *Modern Electrics*, reviewed early cases where radio had provided maritime assistance, beginning with the January, 1909 sinking of the *Republic*. *Radio Broadcast* later ran two articles about SOS emergencies which had occurred in the 1910s, written by George F. Worts under the heading "Adventures of a Wireless Free-Lance". My First SOS--A Farce Comedy was humorous, while A Thrill that Came Thrice in a Night-time reviewed a series of events which saw both rescue and tragedy. Some Stirring Wireless Rescues, a chapter from Francis A. Collins' 1912 *The Wireless Man*, reviewed a number of incidents which had occurred over the previous three years, while noting that radio had changed things so much that an "up-to-date Robinson Crusoe", instead of facing years of isolation after a shipwreck, would now be able to radio for help, then listen to the latest stock market quotations while awaiting rescue. However, radio did not eliminate all the fatalities, as American Marconi's J. Andrew White, in the July, 1915 *The World's Advance*, reported the dedication of A Memorial Fountain to Wireless Operators, which commemorated ten operators who had lost their lives at sea. A February 1, 1916 pamphlet issued by the Department of Commerce, *Important Events in Radiotelegraphy*, included an extensive section, Wireless as a Safeguard to Life at Sea, reviewing radio's use in seagoing emergencies and rescues.

One of most dramatic sea disasters was the sinking of the *Titanic* in the North Atlantic on the morning of April 15, 1912. The *Titanic* -- along with the *Carpathia*, which picked up the survivors -- was staffed by Marconi Wireless operators, and Marconi shore stations along the Canadian, Newfoundland, and U.S. coasts handled most of the communication as the *Carpathia* slowly made its way to New York City. In addition, many inland stations tried to get information about the disaster, which in this unregulated era resulted in extensive interference and confusion. Included in all this was the American Marconi equipped facility, MHI, located atop the New York Wanamaker department store, where David Sarnoff was station manager. Sarnoff would later vastly exaggerate his importance, in progressively embellished retellings, including completely false claims that he was first in the United States to hear of the disaster, and that President Taft silenced other stations so that Sarnoff could become the sole link for gathering information. However, the operators at the New York Wanamaker station did spend long hours listening for reports and survivor lists. A collection of extracts about the *Titanic* comes from the Boston *American* and recountings by David Sarnoff: The *Titanic* and the New York Wanamaker Station. Marconi management also sent messages to the operators aboard the *Carpathia*, telling them to limit what they were publicly reporting, until their accounts could be sold to the newspapers. These activities, plus a complaint that the operators aboard the *Carpathia* were unresponsive to Navy vessels sent by U.S. President Taft, were covered by the New York *Herald*: Marconi Company and *Titanic* Disaster Communication. Amateur radio operators were blamed for much of the chaos experienced immediately after the *Titanic* sank, but it has never really been clear how many of the problems were actually their fault. In 1922, in The Book of Radio (Titanic extract), Charles William Taussig wrote about the next evening after the *Titanic* sank, as amateur operators, voluntarily responding to the emergency, scrupulously maintained complete radio silence in the New York City area, in order to avoid interfering with the survivor lists being transmitted by the *Salem*.

SHIPBOARD NEWSPAPERS

One area where radio's revolutionary effect on ocean-going communication was readily apparent was when shipboard newspapers started to include daily news summaries. As early as 1899 Guglielmo Marconi used onboard reception in order to prepare a shipboard newspaper, as reported in A Wireless Telegraphy Newspaper, from the November 22, 1899 *Electrical Review*. Regular nightly summary news transmissions by Marconi shore stations followed, beginning in June, 1904 -- their introduction was reported in Mid-Sea Wireless Telegraph News, from the May, 1904 *The Electrical Age*. Thanks to radio, the late 1906 issues of the S. S. Hamburg's onboard newspaper, *The Atlantic Daily News*, featured news reports "received by Special Marconigrams", and passengers were also notified that they could send telegrams to nearby ships and shore stations.

July Membership Meeting: The SoftRock Lite V6.2 presentation:

Project started with a 1 1/2" square PC board.

This has been a real learning experience for me. I had to relearn or brush up in some things that I haven't worked with for a long time as well as learn new things to assemble this little 1 14" by 1 1/4" radio. I had done a little work with SMD components at work but not to this extent. I had never wound a toroid coil and hadn't worked with small components on this level before.

First off, The coding on the caps was so small that they were very difficult to read, the color coding on the resistors some times was so close in color that it was hard to distinguish between brown and red. I ended up using an industrial microscope to see this as well as to check out solder joints.

If you do everything in order of the manual and test out each stage as you go it should turn out alright.

1) Stage one was to solder in components and test out the power supply section.

2) Local oscillator was next.

3) Dividers section was next.

4) OpAmps were next on the agenda.

5) RF input came next.

6) Mixer was next.

7) External connections were the last stage of assembly.

Extra caution should be exercised as to **placement of components & orientation** of leads.

I had a problem because I had a capacitor in the wrong holes. It's a lot easier to recheck all this on each and every component before soldering than to have to remove these parts, remove excess solder then replace and/or reorient a part or several parts.

The hardest part for me was the winding of the **toroid coils**. When winding a toroid, a person should leave **30º gap between beginning and ending of coil** (to minimize interaction of inductances from one end of coil winding to the other), which means that you will in some instances a person may have to wind more than one layer on core, making it almost impossible to count turns after winding (granted, its only 38 turns, but a lot can happen to distract a person when winding coils). Therefore, when I finished up a coil, I checked it using an LCR meter which I borrowed for this purpose. The approximate inductances of the finished toroids were printed in the manual (I say approximate inductances because they can vary some, according to how loosely or tightly they are wound, etc). I rewound the first toroid several times before I got it right.

Tools used

Microscope for identification of capacitors (extra fine printing on caps) & color coding of resistors (some colors were very close, such as reds & browns), also for inspecting solder joints

Holder for circuit board while soldering & testing.

Small Soldering Iron, temperature controlled if possible.

Tweezers for handling of tiny parts, i.e. chip capacitors, etc.

VOM or DVOM for testing purposes.

Solder sucker.

Power supply (either 9 volt battery or 12 volt supply).

Oscilloscope not necessary, but helpful in testing.

A short wave receiver with a BFO.

LCR meter for checking inductance of toroid windings.

Materials used or tried besides kit supplied materials

Solder (silver bearing solder) Radio Shack

Solder flux

Solder Paste (which is silver bearing solder)

Solder Wick (very handy)

I do have the board here for everyone to look at and ask questions about, but it does not currently work even though all of the voltages check out against what the assembly manual states. I tried it out with two different computer with a random length of wire for antenna. I was told by one of the people who had to do with the SDR groups at Dayton (didn't catch his name) that not having a 50Ω antenna can have a lot to do with the performance of the receiver. I haven't had a chance to try it out on a proper 50Ω antenna.

Kit availability can be found on Tony Parks, KB9YIG's Web site. Tony's new site: **http://www.kb9yig.com/**

Information

There is a plethora of websites having to do with building and using Software Defined Radios including not only receiver, but also transmitters and more or less complete rigs, some are single band and some are multiple band rigs. a lot of these rigs can be used for different modes as well as different bands.

I know that this project and my treatment of this subject only scratches the surface of SDR, but just think of all the possibilities for experimenting with a fairly inexpensive (spelled cheap) piece of equipment. Not only that, but it'll give you hand-on experience with SMT and winding of toriod coils, to say nothing of just the joy of building a piece of equipment and seeing it through to a satisfactory end. I'm still in the process, but hopefully I can do that.

I did have help from several people namely Mark, AB9CD; Ted Stiller, WA9RDI; and Glenn Schulz, W9IQ, who helped me track down a couple of problems, KC9BZU, who helped me with tracking down the proper check out method for toroid inductance.

Ideas tried & discarded

Solder paste idea was discarded due to exploding of electrolytic capacitor

Cup warmer for pre-warming board prior to soldering, using the solder paste method.

Use of a Scope and an audio or RF generator to find out inductance of toroid coils

By Poncho Doneis KA9OFA

Testing & Local SwapFests

VE Testing

There will be no VEC Testing in August

Amateur Electronic Supply 5720 W. Good Hope Rd. Milwaukee, WI 53223

Local Swapfests

Saturday, August 22nd

Baraboo Swapfest 8:00am**, Baraboo Wisconsin.**

Directions:

From I-90/94: Take exit 106 (Hwy. 33) West to Baraboo. Go to the second stoplight and turn left

http://www.yellowthunder.org

Talk-In: 147.315 MHz + offset (PL 123.0)

Saturday, September 12th

ORC Fall Ham & Hobby Swapfest

Ozaukee Radio Club

Fireman's Park

http://www.ozaukeeradioclub.org

Talk-In: 146.970MHz - offset (PL 127.3)

Working Committees

Field Day

- Mark - AB9CD

FM Simplex Contest

- Sherm – KB9Q
- Joe – N9UX
- Jeff – K9VS
- Brian— K9LCQ

Ticket drum and drawing

- Tom – N9UFJ
- Jackie – No Call

Newsletter Editor

- Michael-KC9CMT

Webmaster

- Open

Refreshments

- Michael – KC9CMT

Membership Information

The Hamateur Chatter is the newsletter of MRAC (Milwaukee Radio Amateurs' Club), a not for profit organization for the advancement of amateur radio and the maintenance of fraternalism and a high standard of conduct. MRAC Membership dues are $17.00 per year and run on a calendar year starting January 1st. MRAC general membership meetings are normally held at 7:00PM the last Thursday of the month except for November when Thanksgiving falls on the last Thursday when the meeting moves forward 1 week to the 3rd Thursday and December, when the Christmas dinner takes the place of a regular meeting. Club Contact Information Our website address http://www.w9rh.org

Telephone (414) 332-MRAC (6722)

Address correspondence to: **MRAC PO Box 070695, Milwaukee WI 53207-0695**.

Email may be sent to

w9rh@arrl.net

Our YAHOO newsgroup:

http://groups.yahoo.com/group/MRAC-W9RH/

CLUB NETS:

- Our Six Meter SSB net is Thursday at 8:00PM on 50.160 MHz USB
- Our Ten Meter SSB net is Friday at 8:00PM on 28.490 MHz ± 5 KHz USB.
- Our Two Meter FM net follows at 9:00PM on our repeater at 145.390MHz - offset (PL 127.3)

Milwaukee Area Nets

Mon.8:00 PM 3.994 Tech Net

Mon.8:00 PM 146.865- ARES Walworth ARRL News Line

Mon.8:00 PM 146.445 Emergency Net

Mon.8:00 PM 146.865- ARES Net Walworth

Mon.8:45 PM 147.165- ARRL voice news (ARES)

Mon.9:00 PM 50.160 6 mtr .SSB NET

Mon.9:00 PM 147.165- ARES Net Waukesha-Milwaukee

Tue.9:00 AM 50.160 6 . Mtr 2nd Shifter's Net

Tue. 10:00 PM 145.130 Handshakers National Net

Tue. 8:00 PM 7.035 A.F.A.R. (CW)

Wed. 8:00 PM 145.130 MAARS Amateur Radio Newsline

Wed. 9:00 PM 145.130 MAARS IRLP SwapNet

Thur. 9:00 PM 50.160, 6 mtr SSB Net

Thur. 9:00 PM 146.910 Computer Net

Fri. 8:30 PM 28.490 MRAC W9RH 10 mtr Net SSB

Fri. 9:00 PM 145.390 W9RH 2 mtr. FM Net

Sat. 9:00 PM 146.910 Saturday Night Fun Net

Sun 8:30 AM 3.985 QCWA (Chapter. 55) SSB Net

Sun 9:00 AM 145.565 X-Country Simplex Group

Sun.10:00 AM 443.800+ FM-38 link to 146.88 Baraboo SWAP Net

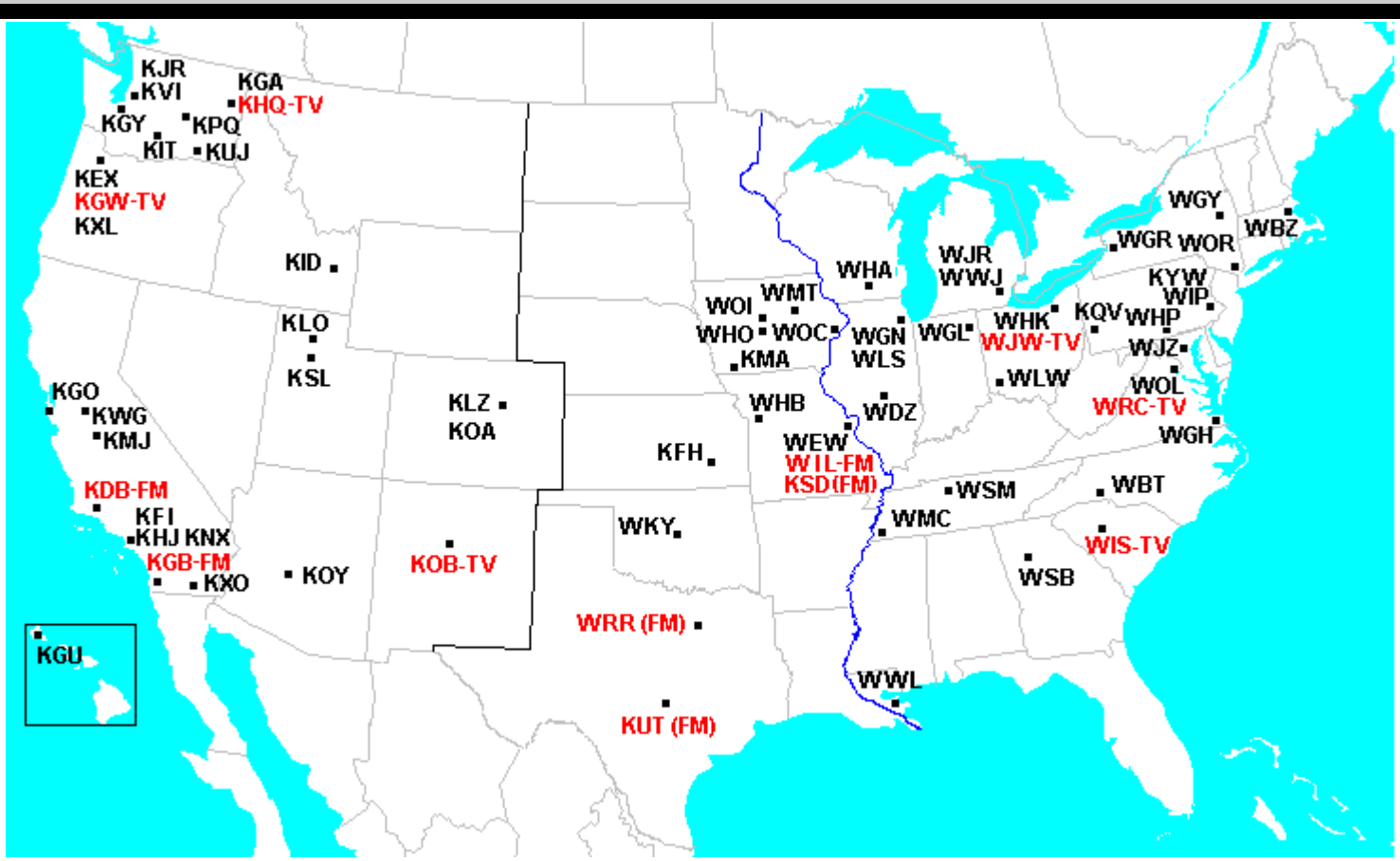
Sun 9:00 PM 146.910 Swap Net

Sun 8:00 PM 146.910 Information Net

Sun.8:00 PM 28.365 10/10 International (Milwaukee Ch.) (SSB)

2 meter repeaters are offset by 600KHz - - 70 centimeter repeaters are offset by 5 MHz

SSB frequencies below 20 meters are LSB and for 20 mtrs and above are US



Current Three-Letter Calls in the United States